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AMIS-PELENG

AVIATION METEOROLOGICAL SYSTEM

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AMIS-PELENG AVIATION METEOROLOGICAL SYSTEM

Automated Meteorological Information System (AMIS) is a flexible, configurable airport weather observing system that collects, processes and visually displays meteorological data

The AMIS helps aviation specialists make decisions based on real-time weather data

AMIS meteorological information is available to all authorized users via workstations and various interfaces of other airport systems

ADVANTAGES

1. Compliance with WMO regulations, ICAO standards and recommendations, including requirements for Category III
2. Generation of weather reports: METAR and SPECI, MET REPORT and SPECIAL, SYNOP, WAREP
3. Measurement of a basic set of parameters: wind direction and speed, atmospheric pressure, air temperature and humidity, cloud height, meteorological visibility, precipitation amount
4. Scalability of system components depending on the airport needs
5. Compatibility with various sensor types
6. Seamless integration of meteorological data into air traffic control systems, broadcasting systems (ATIS/VOLMET).
7. Built on a client-server architecture using web technologies.
8. Fully configurable and modular system
9. Diagnostics of system sensors and microservices
10. Adapting the interface design to the user's requirements
11. Confirmed data retention reliability due to system central device redundancy.
12. Guaranteed security through authorization
13. Runs on Windows or Linux OS
14. Possibility of remote connection, control and maintenance

SYSTEM STRUCTURE

- The AMIS-Peleng standard set consists of a set of sensors, communication equipment, a central unit, and a workstation
- **The AMIS structure components include:**
  - **Central unit with uninterruptible power supplies**
  - **Communication equipment**
  - **User workstations**
  - **Display facilities for aerodrome services**
  - **Sensors, installation and maintenance sets**
- All critical system functions can be duplicated for uninterrupted operation
- A standard AMIS set can be expanded across various structural components without limitations

WORKSTATIONS

- The number of workstations depends on the system configuration
- Workstations can be used by any authorized user, but the set of available applications is determined by the rights established in the system
- **The commonly used workstations are:**
  - **Control Workstation (ADMINISTRATOR)**
  - **Observation Workstation (OBSERVER)**
  - **Data Display Workstation (DISPATCHER)**
  - **Maintenance Workstation (MAINTENANCE STAFF)**

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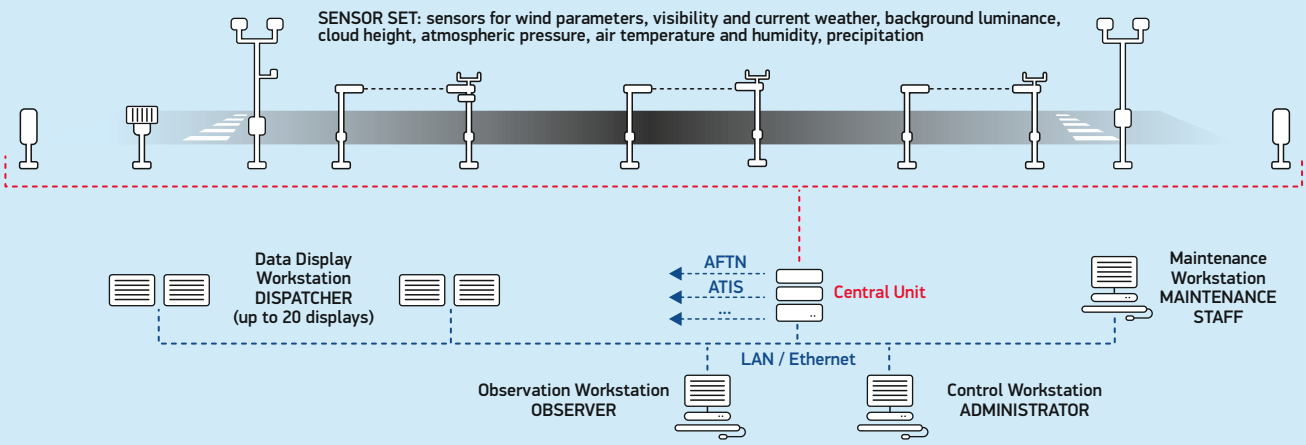

SOFTWARE ARCHITECTURE

- The AMIS software consists of the specialized Central Unit software which performs main operational tasks, and monitors and controls the system processes
- The central unit is represented by the main and backup servers, which collect sensor data, perform calculations, generate reports and messages, continuously carry out diagnostics of incoming data and the entire system, register and store all incoming and outgoing information
- The AMIS software has a configurable interface for servicing helipads according to user needs
- The AMIS software has an user-friendly workstation interface, the study of which requires minimal time
- The AMIS software runs on Windows or Linux operating environments

INTEGRATION

- The AMIS system architecture structure ensures smooth integration of meteorological data into any airport service systems and other meteorological systems

COMMUNICATION

- AMIS can interact with various input and output data formats
- Enables interaction using AFTN, GTS
- Synchronizes with the airport's precise time standard (provided by NTP server)

DATABASE

- AMIS contains a relational database for data storing, which allows generating various reporting forms
- The user works with the system database through queries; the received data can be generated into reports and graphs, exported or sent for printing

STANDARDS AND CERTIFICATION

- The system is developed in accordance with WMO and ICAO standards

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